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BC Stats

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Recycling in BC

With British Columbia's healthy economy and expanding population comes increasing concern over the amount of waste produced, its handling and its impact on the environment. Landfills across the country are reaching capacity and it is becoming more challenging to locate sites for new ones.[1] The recycling of materials and packaging can considerably reduce the quantity of waste entering landfills and contribute to the protection of natural resources. Landfill sites produce about 25% of Canada's total methane emissions, which as a greenhouse gas is 20 times more potent than carbon dioxide.

Waste production is increasing

In 2004, households across the country produced 13.4 million tonnes of waste, nearly three-quarters (73%) of which was sent for disposal, while the remainder was recycled.[2]

Municipalities and businesses in BC disposed of 2.8 million tonnes of waste in 2004. This was an increase of 5.7% over 2002, higher than the national increase (+5.0%) over the same period. Of this waste, approximately 1.0 million tonnes came from residential sources with the remainder (1.8 million) disposed of by non-residential sources. Residential waste disposal in the province increased by 60 thousand tonnes (+7.8%) between 2002 and 2004, while non-residential waste[3] disposal increased at a slightly slower pace (+4.6%). While some of the overall increase in waste disposal was due to a rise in population, most was a result of increases in the amount of waste generated per person.

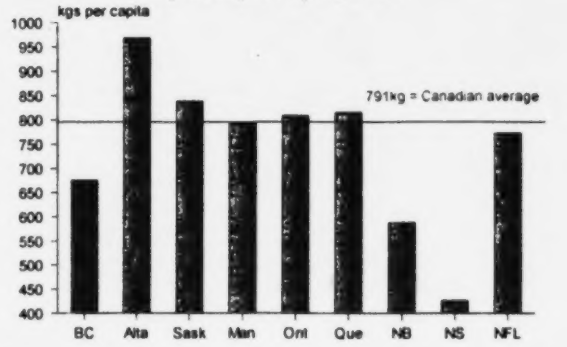
British Columbians produced 653 kg per person of residential waste in 2002; by 2004, this figure had increased to 676 kg per person. The per capita increase was again more significant than that for Canada as a whole (+2.8%). However, by way of comparison, the overall waste disposal per capita remained considerably lower than the national average (791 kg per capita) in 2004.

[1] Environment Canada, 2003, The 4 R's -Reduce, reuse, Recycle and Recover, www.atl.ec.gc.ca/udo/reuse.html

[2] Statistics Canada, 2007, Waste Management Industry Survey: Business and Government Sectors, Cat. No. 16-F0023-XIE.

[3] Non-residential waste includes municipal solid non-hazardous waste generated by industrial, commercial and institutional sources as well as waste generated by construction and demolition activities.

BC ranks third lowest in the country for waste disposed per capita, 2004



Data Source: Statistics Canada note: data for PEI not available

Recycling is on the rise

While the overall disposal of waste has been increasing in recent years, recycling has simultaneously become more common. Access to recycling programs across the country has improved considerably of late and Canadians are recycling significantly larger quantities.[4]

In 2004, 31% of the total non-hazardous waste generated in BC was diverted[5] from disposal, significantly higher than the national average (24%). Nova Scotia (36%) and PEI (35%) had the highest diversion rates, while Saskatchewan (14%) and Newfoundland and Labrador (8%) had by far the lowest. On a per capita basis BC leads the provinces in diverting waste from landfills (298 kg per capita), followed by Quebec (282 kg per capita).

BC is a also a leader among the provinces for recycling, with residents recycling substantially more than the average Canadian. The average British Columbian recycled approximately 144kg of material in 2004, up substantially from 2002 (121kg). BC was second only to Nova Scotia (157kg) in residential recycling per capita and far exceeded the national average (112kg). Saskatchewan residents recycled an average of just 54kg per capita in 2004, the lowest rate in the country.

BC ranks second in the country for residential recycling per capita, 2004

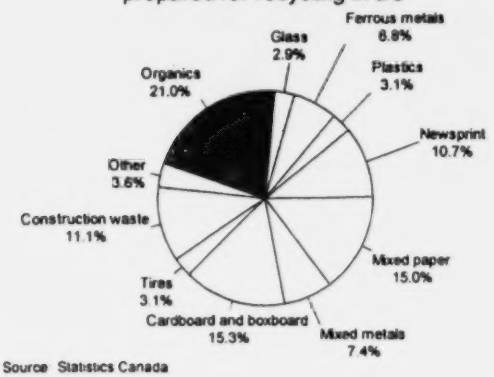
Data Source: Statistics Canada note: data for PEI and Newfoundland not available

By weight, organics comprise the largest portion of recycled materials in the province, accounting for approximately 21% of recycled materials from all sources in 2004. This was followed by mixed paper and cardboard and boxboard (each 15%).

[4] Residential recyclable materials consist of solid non-hazardous materials produced in residences including materials that are picked up by the municipality (either using its own staff or through contracting firms) and materials from residential sources that are self-hauled to depots, transfer stations and disposal facilities. Data do not cover any wastes that are managed on-site by the waste generator.

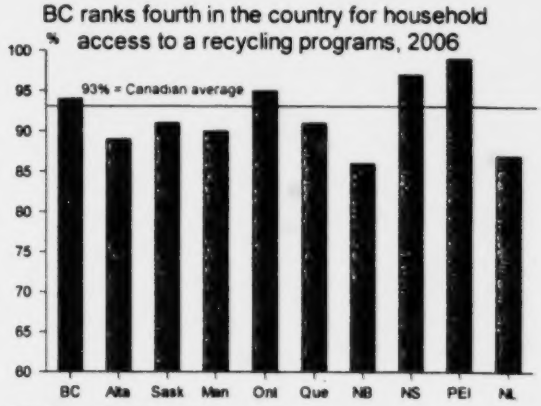
[5] Diversion represents the sum of all materials processed for recycling or reuse at an off-site recycling or composting facility (i.e. the quantity of materials diverted from disposal facilities.)

Organics make up the largest portion of materials prepared for recycling in BC



Source: Statistics Canada

BC ranks fourth in the country for household access to a recycling programs, 2006



Data Source: Statistics Canada

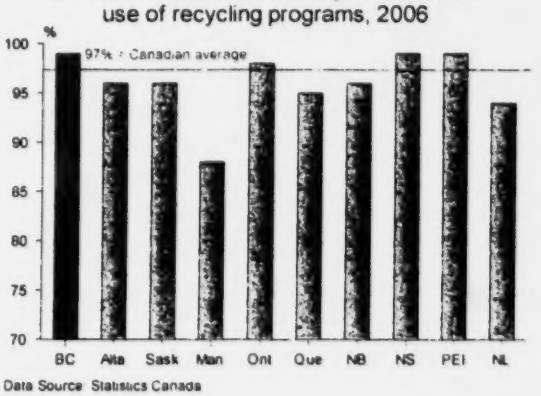
Household access to and use of recycling programs is becoming more prevalent

The availability of recycling programs differs from province to province and between municipalities. Materials such as paper, cardboard, plastics, metals, yard and food waste can be recycled or composted. Varying degrees of access to recycling programs are likely to impact provincial and municipal rates of recycling.

In 2006, 94% of BC' households had access to at least one form of recycling program. Of these households, 99% made use of at least one of the programs. Across the country, there was considerable variability in access to and use of recycling programs. With 99% of households reporting having access to and making use of at least one recycling program, Prince Edward Island scored the highest in the country for both access and utilization.

Among other provinces where households reported comparatively high rates of access to recycling programs were Nova Scotia (97%) and Ontario (95%). Usage of one or more programs was also high in those regions. On the other side of the scale, provinces that lagged in terms of access to recycling programs included New Brunswick (86%), Newfoundland and Labrador (87%) and Alberta (89%). However, given access, over 90% of households in these provinces used at least one recycling program. Three other provinces reported overall access rates below that of the national average (93%). Manitobans were the least likely to recycle, with 90% of households having access to programs, yet only 88% of those actually recycled.

BC ties for first in the country in household use of recycling programs, 2006



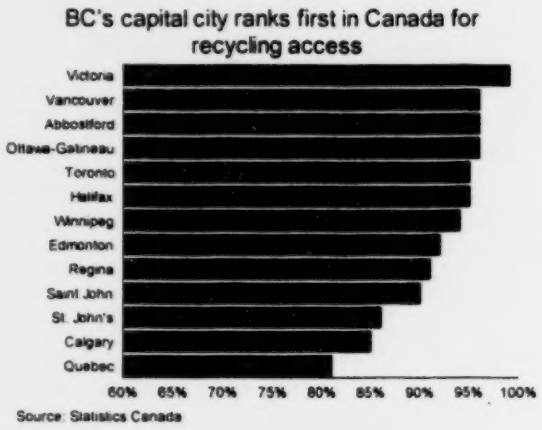
Data Source: Statistics Canada

Further variability among provinces exists in terms of the type of recycling programs available to households. In general, provinces offered reasonably wide-ranging access to recycling programs for different materials. Access to glass and paper recycling programs (each 88%) in Canada was most common, while 87% had access to plastic recycling, and 86% to metal cans. Program access was relatively stable among the provinces with access to recycling programs for most materials hovering between approximately 80% and 99%.

However, one noteworthy exception was found in Newfoundland & Labrador, which could explain that province's low overall accessibility rates. A mere 35% of households had access to paper recycling, and just 61% had access to metal recycling. Glass (75%) and plastic (72%) recycling programs were also less common than in other parts of the country.

Households in BC were the most likely (99%) in the country (tied with Nova Scotia) to use recycling programs for all recyclable materials, providing they had access. Use of recycling in the province was 96% for glass, paper and plastic, and 95% for metal cans.

Last year, BC's largest cities were among the highest ranked in the country in terms of accessibility and use of recycling programs. In fact, at 99%, households in the province's capital city outranked every other census metropolitan area (CMA) in Canada in terms of overall recycling access. Abbotsford and Vancouver (each 96%) were also among the highest in the country. Access to recycling programs for glass, paper, plastics and metal cans were 90% or higher in all three cities. However, accessibility rates for plastics (89%) and metal (88%) recycling in Abbotsford were slightly lower. The CMAs with the lowest rate of access to recycling programs in 2006 were Quebec City (81%) and Calgary (85%), both well below the average for all Canadian CMAs (93%)

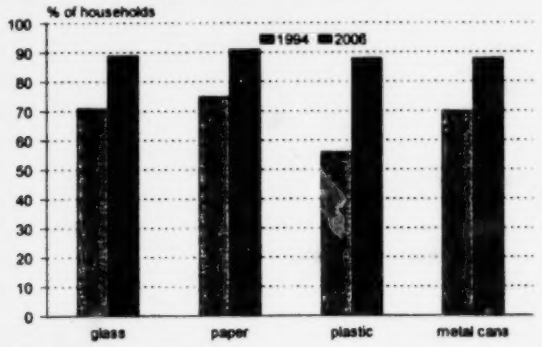


Has access and use improved since the mid 1990s?

Overall, access to glass, paper, plastic and metal recycling programs in BC have all improved substantially over the past decade. Actual usage of recycling programs by British Columbia's households has also increased for all recyclable materials.

This is particularly notable when it comes to availability of recycling programs for plastic materials. In 1994, only 56% of households in the province had access to such programs and by 2006 that number had reached 88%. Other materials such as glass (71% in 1994 to 89% in 2006), metal cans (70% to 88%) and paper (75% to 91%) also showed significant increases in access rates over the same period.

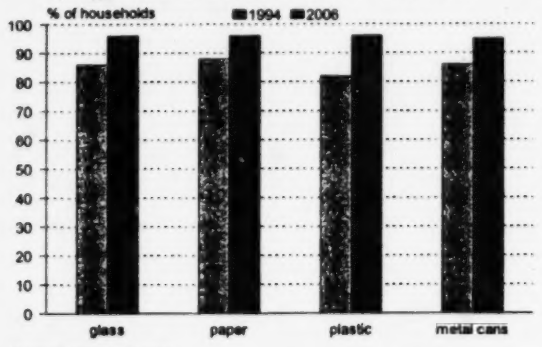
Percentage of BC households with access to recycling programs, 1994 and 2006



Source: Statistics Canada

Similarly, usage rates for households with access to recycling programs also showed considerable growth. Since 1994, recycling utilization rates for most materials had jumped about ten percentage points and each exceeded 95% in 2006.

Percentage of BC households with access to recycling programs that used them, 1994 and 2006



Source: Statistics Canada

The simultaneous increase in access and utilization of recycling programs suggest that there may have been improvements in collection practices and availability in the province's municipalities and that British Columbians have become more conscious of the significance of recycling.

Similar advances were made across the country between 1994 and 2006. Of the provinces, Prince Edward Island showed the most progress, becoming the country's leader in access and usage for all but one recycling program. In 1994, households on the island had less than 21% access to recycling programs for each recyclable material, and use of each recycling program was below 70%. By 2006, access and use for each recycling program had risen to above 95%.

Looking ahead

A myriad of dynamics influence the keenness to recycle. Social norms, informational campaigning, and barriers to recycling including collection method, distance to drop-off location and required sorting of materials are among the most influential factors. Having access to recycling programs is inarguably one of the key factors that determine whether Canadians recycle and such access varies by province and municipality.

The recent electronic product stewardship plan in BC, which added computers, televisions, computer monitors and computer peripherals to the Recycling Regulation making industry responsible for the lifecycle management of their products, is an example of a stride made to increase the province's recycling options.[6] As such options are developed and spread across the province, so is awareness and ease of the entire recycling process for residents and businesses alike.

All of this contributes to setting the stage for British Columbia to continue on a path towards diverting more materials from the province's landfills and towards significantly reducing waste produced in the province.

[6] For more information on BC's electronic product stewardship plan, visit www.recycling.gov.bc.ca

Table 1
Percent of households that had access[1] to, and used[2] recycling programs, by material and by province, 2006

	Glass		Paper		Plastics		Metal cans		Any recyclable material[3]	
	Access to Program	Used Program	Access to Program	Used Program	Access to Program	Used Program	Access to Program	Used Program	Access to Program	Used Program
Canada	88	94	88	94	87	95	86	94	93	97
Newfoundland & Lab.	75	92	35	74	72	92	61	90	87	94
Prince Edward Is.	96	98	98	96	99	99	99	99	99	99
Nova Scotia	94	97	93	96	93	98	93	97	97	99
New Brunswick	69	92	62	83	69	93	66	93	86	96
Quebec	86	93	89	94	87	94	85	93	91	95
Ontario	93	97	93	97	92	97	91	97	95	98
Manitoba	85	84	87	86	84	86	83	87	90	88
Saskatchewan	81	92	81	83	77	91	74	86	91	96
Alberta	84	92	79	88	77	89	77	87	89	96
British Columbia	**89**	**96**	**91**	**96**	**88**	**96**	**88**	**95**	**94**	**99**

Notes:

1. Access to program as a % of all households

2. Use of program as a % of those households that reported having access to a recycling program

3. "Any recyclable material" includes any recyclable materials such as glass, paper, plastics or metal cans

Source: Statistics Canada.

Table 2
Percent of households that had access[1] to, and used[2] recycling programs, by material and by province, 1994 and 2006

	Access to Programs								Used programs							
	Glass		Paper		Plastics		Metal cans		Glass		Paper		Plastics		Metal cans	
	1994	2006	1994	2006	1994	2006	1994	2006	1994	2006	1994	2006	1994	2006	1994	2006
Canada	67	88	70	88	63	87	67	86	84	94	83	94	82	95	84	94
Newfoundland & Lal	12	75	20	35	19	72	21	61	41	92	44	74	47	92	49	90
Prince Edward Is.	19	96	21	98	17	99	17	99	67	98	70	96	63	99	65	99
Nova Scotia	47	94	50	93	43	93	48	93	69	97	73	96	67	98	70	97
New Brunswick	73	69	47	62	61	69	70	66	83	92	59	83	78	93	82	93
Quebec	50	86	57	89	50	87	49	85	71	93	74	94	71	94	71	93
Ontano	92	93	84	93	78	92	82	91	93	97	93	97	92	97	93	97
Manitoba	59	85	61	87	61	84	61	83	46	84	48	86	51	86	51	87
Saskatchewan	75	81	69	81	74	77	77	74	81	92	73	83	81	91	81	86
Alberta	73	84	71	79	66	77	72	77	79	92	76	88	71	89	79	87
British Columbia	**71**	**89**	**75**	**91**	**56**	**88**	**70**	**88**	**86**	**96**	**88**	**96**	**82**	**96**	**86**	**95**

Notes:
1. Access to program as a % of all households
2. Use of program as a % of those households that reported having access to a recycling program
Source: Statistics Canada.

Table 3

Percent of Households that had access to recycling programs, by census metropolitan area, 2006

	Access to any[1] programs	Used Program[2]
Victoria	99	99
Vancouver	96	96
Abbostford	96	96
Edmonton	92	92
Regina	91	91
Winnipeg	94	94
Toronto	95	95
Ottawa-Gatineau	96	96
Quebec	81	81
Saint John	90	90
Halifax	95	95
St. John's	86	86

Notes:

1. Access to program as a % of all households

2. Use of program as a % of those households that reported having access to a recycling program

Source: Statistics Canada.

TABLE 4

Disposal of waste, by source and province, 2002 and 2004 (tonnes)

	Residential Sources		Non-residential sources		Total waste disposed	
	2002	2004	2002	2004	2002	2004
Canada	9,447,531	9,792,787	14,633,841	15,498,228	24,081,371	25,291,015
Newfoundland & Lab.	216,218	228,004	160,376	172,044	376,594	400,048
Prince Edward Is.	n/a	n/a	n/a	n/a	n/a	n/a
Nova Scotia	169,649	179,262	219,546	220,705	389,194	399,967
New Brunswick	203,506	208,120	210,100	234,053	413,606	442,173
Quebec	2,876,000	2,904,000	2,970,459	3,255,960	5,846,459	6,159,960
Ontario	3,438,408	3,522,369	6,207,225	6,530,785	9,645,633	10,053,154
Manitoba	412,612	450,658	483,944	477,460	896,556	928,118
Saskatchewan	278,692	298,612	516,432	534,899	795,124	833,511
Alberta	866,398	943,420	2,023,896	2,133,890	2,890,294	3,077,311
British Columbia	**929,101**	**1,001,147**	**1,758,781**	**1,840,214**	**2,687,882**	**2,841,361**

Note: n/a denotes not available

Source: Statistics Canada.

TABLE 5

Materials prepared for recycling by type (tonnes)

	BC	Canada
Newsprint	135,414	1,349,683
Cardboard and boxboard	193,045	1,367,011
mixed paper	189,345	570,154
glass	35,991	399,290
ferrous metals	85,471	675,818
copper and aluminum	5,870	49,289
mixed metals	93,530	195,639
white goods	x	236,786
electronics	x	10,245
plastics	38,623	188,307
tires	38,508	139,331
construction, renovation and dc	140,514	848,197
other materials	24,088	165,755
organics	265,514	1,669,145
TOTAL	**1,261,667**	**7,864,647**

Note: Figures may not add due to rounding

x denotes supressed data

Source: Statistics Canada.

TABLE 6

Residential recycling 2002 and 2004

	Residential Recycling		Residential recycling per capita	
	2002	2004	2002	2004
	tonnes		kilograms	
Canada	2,789,669	3,582,301	89	112
Newfoundland & Lab.	25,993	n/a	50	n/a
Prince Edward Is.	n/a	n/a	n/a	n/a
Nova Scotia	122,707	147,317	131	157
New Brunswick	57,192	61,519	76	82
Quebec	595,000	697,000	80	92
Ontario	1,029,042	1,504,678	85	121
Manitoba	79,923	80,326	69	69
Saskatchewan	39,345	53,445	40	54
Alberta	320,536	361,926	103	113
British Columbia	**496,751**	**606,603**	**121**	**144**

Note: Figures may not add due to rounding and lack of availability of data for some provinces

n/a denotes not available

Source: Statistics Canada.

TABLE 7

Residential waste disposal 2002 and 2004

	Total waste disposed		Waste disposed per capita	
	2002	2004	2002	2004
	tonnes		kilograms	
Canada	24,081,371	25,291,015	769	791
Newfoundland & Lab.	376,594	400,048	725	773
Prince Edward Is.	n/a	n/a	n/a	n/a
Nova Scotia	389,194	399,967	416	427
New Brunswick	413,606	442,173	551	588
Quebec	5,846,459	6,159,960	785	816
Ontario	9,645,633	10,053,154	797	809
Manitoba	896,556	928,118	776	793
Saskatchewan	795,124	833,511	798	838
Alberta	2,890,294	3,077,311	927	968
British Columbia	**2,687,882**	**2,841,361**	**653**	**676**

Note: Figures may not add due to rounding and lack of availability of data for some provinces

n/a denotes not available

Source: Statistics Canada.